

# WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

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March 18, 2010

TO: Internal File

THRU: James D. Smith, Permit Supervisor *JS 03/23/10*

FROM: April A. Abate, Environmental Scientist II/Hydrologist *AAA 3/23/2010*

RE: 2009, 3rd Quarter Water Monitoring, Savage Services Corporation, Savage Coal Terminal, C/007/0022 Task #3386

The Savage Coal Terminal is an operating coal loadout where coal is crushed, screened, blended, and then loaded onto rail transport. The operation was restarted in 2006 after several years of being in cessation.

Pertinent water monitoring requirement information is in the MRP in Section 731.200.

1. Was data submitted for all of the MRP required sites? YES ☒ NO ☐

**Springs** –

The Permittee is not required to monitor any springs at the Savage Coal Terminal. There are no springs to monitor.

**Streams** –

Stream site CV-14-W was not monitored during the 3<sup>rd</sup> quarter of 2009. The Permittee is required to sample CV-14-W in the second and fourth quarter of each year.

**Wells**–

Groundwater monitoring wells S-1-GW and S-2-GW were monitored this quarter. Monitoring well S-1-GW was dry. The Permittee is required to sample CV-1-W in the second and fourth quarter of each year. S-1-GW and S-2-GW are monitored quarterly. **Beginning in 2010, they will be monitored during the second and forth quarter only.**

## UPDES

There is one active UPDES outfall at the Savage Coal Terminal, CV-15-W, or UTG040005-001. The Permittee is required to monitor this UPDES site monthly under Permit # UTG040005 that is due to expire on April 13, 2013.

The location was monitored monthly during the 3rd quarter. The Permittee recorded no flow at the UPDES point during the period.

2. Were all required parameters reported for each site? YES ☒ NO ☐

3. Were any irregularities found in the data? YES ☒ NO ☐

Data from groundwater monitoring well S-2-GW indicate that elevated levels of total suspended solids (TSS) and total iron were noted in the 3<sup>rd</sup> quarter 2009 sample at concentrations of 316 mg/L and 6.407 mg/L, respectively. Although there are no groundwater standards for TSS and total iron, as a reference, the UPDES permit daily limitation for TSS is 70 mg/l.

In addition, some of the data (shown below in bold/italic) from groundwater sample S-2-GW did not pass standard water quality reliability checks:

Reliability Check	Acceptable Range	S-2-GW Values
Cation/Anion Balance	<5%	2.70%
TDS/Conductivity	>0.55 - <0.75	<b>0.98</b>
Conductivity/Cations	<90 & >110	72.06
K/(Na + K)	<20%	0.7%
Mg/(Ca + Mg)	<40%	37.9%
Ca/(Ca + SO <sub>4</sub> )	>50%	<b>6.6%</b>
Na/(Na + Cl)	>50%	93.4%

This does not mean that something is wrong, just that there may be something unusual in the water chemistry of the sample collected.

4. On what date does the MRP require a five-year re-sampling of baseline water data.

The permit renewal was issued on August 6, 2009. Currently there is no specified baseline sampling protocol established for the groundwater monitoring wells.

**5. Based on your review, what further actions, if any, do you recommend?**

Continue to monitor TSS and total iron concentrations as well as TDS/Conductivity, and Calcium/Sulfate ratios for any evidence of trends.

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